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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.
10/618,736	07/15/2003	Hiroshi Shinoda	NIT-383	7263
7590 02/04/2004 Mattingly, Stanger & Malur, P.C. Suite 370 1800 Diagonal Road Alexandria, VA 22314			EXAMINER ALSOMIRI, ISAM A	
			ART UNIT 3662	PAPER NUMBER

DATE MAILED: 02/04/2004

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary

Application No.

10/618,736

Applicant(s)

SHINODA ET AL.

Examiner

Isam A Alsomiri

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-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --

Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If the period for reply specified above is less than thirty (30) days, a reply within the statutory minimum of thirty (30) days will be considered timely.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133).
- Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 15 July 2003.
- 2a) ☐ This action is **FINAL**. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-13 is/are pending in the application.
- 4a) Of the above claim(s) 13 is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-7 and 11 is/are rejected.
- 7) ☒ Claim(s) 8,9 and 12 is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☐ The specification is objected to by the Examiner.
- 10) ☒ The drawing(s) filed on 15 July 2003 is/are: a) ☒ accepted or b) ☐ objected to by the Examiner.
- Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
- Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. §§ 119 and 120

- 12) ☒ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☒ All b) ☐ Some * c) ☐ None of:
1. ☒ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.
- 13) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. § 119(e) (to a provisional application) since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.
- a) ☐ The translation of the foreign language provisional application has been received.
- 14) ☐ Acknowledgment is made of a claim for domestic priority under 35 U.S.C. §§ 120 and/or 121 since a specific reference was included in the first sentence of the specification or in an Application Data Sheet. 37 CFR 1.78.

Attachment(s)

- 1) ☒ Notice of References Cited (PTO-892)
- 2) ☐ Notice of Draftsperson's Patent Drawing Review (PTO-948)
- 3) ☒ Information Disclosure Statement(s) (PTO-1449) Paper No(s) _____
- 4) ☐ Interview Summary (PTO-413) Paper No(s). _____
- 5) ☐ Notice of Informal Patent Application (PTO-152)
- 6) ☐ Other: _____

DETAILED ACTION

Election/Restrictions

Restriction to one of the following inventions is required under 35 U.S.C. 121:

- I. Claims 1-12, drawn to an automotive radar with a diffractive wave prevention structure, classified in class 342, subclass 5.
- II. Claim 13, drawn to an automotive radar with a top face of a grounding conductor plate wherein the transmitter is positioned higher than the receiver, classified in class 342, subclass 70.

The inventions are distinct, each from the other because of the following reasons:

Inventions I and II are related as subcombinations disclosed as usable together in a single combination. The subcombinations are distinct from each other if they are shown to be separately usable. In the instant case, invention I has separate utility such as diffracted wave prevention structure. See MPEP § 806.05(d).

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art as shown by their different classification, restriction for examination purposes as indicated is proper.

Because these inventions are distinct for the reasons given above and have acquired a separate status in the art because of their recognized divergent subject matter, restriction for examination purposes as indicated is proper.

During a telephone conversation with John R. Mattingly, Req. No. 30,293 on January 7, 2004 a provisional election was made with traverse to prosecute the invention of group I, claims 1-12. Affirmation of this election must be made by applicant in replying to this Office action.

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Claim 13 withdrawn from further consideration by the examiner, 37 CFR 1.142(b), as being drawn to a non-elected invention.

Applicant is reminded that upon the cancellation of claims to a non-elected invention, the inventorship must be amended in compliance with 37 CFR 1.48(b) if one or more of the currently named inventors is no longer an inventor of at least one claim remaining in the application. Any amendment of inventorship must be accompanied by a request under 37 CFR 1.48(b) and by the fee required under 37 CFR 1.17(i).

Claim Rejections - 35 USC § 102

The following is a quotation of the appropriate paragraphs of 35 U.S.C. 102 that form the basis for the rejections under this section made in this Office action:

A person shall be entitled to a patent unless –

(b) the invention was patented or described in a printed publication in this or a foreign country or in public use or on sale in this country, more than one year prior to the date of application for patent in the United States.

Claims 1-2, 6, and 10 are rejected under 35 U.S.C. 102(b) as being anticipated by Honma US 6,335,699. Referring to claim 1, Honma discloses in figure 1 an automotive radar comprising: transmitting antenna and receiving antennas (see col. 3 lines 40-49) arranged on the top face of a grounding conductor plate 2 (antenna), and radar transmitter/receiver apparatus for supplying transmit signals to the transmitting antenna and detecting the azimuth of an obstacle from Signals of a wave reflected by the obstacle and received by the receiving antennas (inherent in a radar system), wherein: diffracted wave prevention structure 13 is provided at edges of the top face of said grounding conductor plate at least part.

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Referring to claim 2, Honma discloses in figure 1 the diffracted wave prevention structure comprises a radio wave absorber (see col. 9 lines 18-29) covering said top face edges at least in part and arranged on the top face of said grounding conductor plate 2.

Referring to claim 6, Honma discloses in figure 1 and 12 the radome covering the front of said transmitting antenna and said receiving antennas, wherein said radio wave absorbers are fitted in advance to the radome (see col. 1 lines 31-37, figure 1).

Referring to claim 10, Honma discloses in figure 6 the diffracted wave prevention structure has a configuration in which the top face edges of said grounding conductor plate 2 are at least in part made up of at least two faces.

Claim Rejections - 35 USC § 103

The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

Claims 3 and 7 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honma US 6,335,699 in view of Matsuoka US 6,335,680. Referring to claim 3, Honma does not disclose a radio wave absorber is also arranged between said transmitting antenna and said receiving antennas. Matsuoka teaches a radio wave absorber is also arranged between said transmitting antenna and said receiving antennas (see col. 4 lines 1-9). It would have been

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obvious to modify Honma's system to include the middle absorbing structure to reduce the electric wave components straying from the transmitting antenna into the receiving antenna.

Referring to claim 7, Honma discloses in figure 1 and 12 the radome covering the front of said transmitting antenna and said receiving antennas, wherein said radio wave absorbers are fitted in advance to the radome (see col. 1 lines 31-37, figure 1).

Claim 5 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honma US 6,335,699 in view of Matsuoka US 6,335,680 as applied to claim 3 above, and further in view of Takao JP410093329A. Honma does not disclose the radio wave absorber is comprised of a sponge material containing radio wave absorbing grains. Takao teaches radio wave absorber is comprised of a sponge material containing radio wave absorbing grains (see Abstract). It would have been obvious to modify Honma's system to use a sponge material for the radio absorber for it's light weight, cost less, and because it's a good radio wave absorbing material.

Claim 4 is rejected under 35 U.S.C. 103(a) as being unpatentable over Honma US 6,335,699 in view of Takao JP410093329A. Honma does not disclose the radio wave absorber is comprised of a sponge material containing radio wave absorbing grains. Takao teaches radio wave absorber is comprised of a sponge material containing radio wave absorbing grains (see Abstract). It would have been obvious to modify Honma's system to use a sponge material for the radio absorber for it's light weight, cost less, and because it's a good radio wave absorbing material.

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Claim 11 are rejected under 35 U.S.C. 103(a) as being unpatentable over Honma US 6,335,699. Honma does not show the diffracted wave prevention structure hay a configuration in which the top face edges of said grounding conductor plate at least in part have curved face. However, such modification is well known and is a design chose. Furthermore, it would be obvious to modify Honma's system so the conductor plate (antenna 2) is curved at the edges, to reduce radar scattering from edges

Allowable Subject Matter

Claims 8, 9, and 12 are objected to as being dependent upon a rejected base claim, but would be allowable if rewritten in independent form including all of the limitations of the base claim and any intervening claims.

Conclusion

The prior art made of record and not relied upon is considered pertinent to applicant's disclosure. The prior art cited to (Okai et al.; Honma '138; Kitahara et al.; Perkins et al.) show various radar systems including radar absorbers.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Isam A Alsomiri whose telephone number is 703-305-5702. The examiner can normally be reached on Monday-Thursday and every other Friday (8:30-5:00).

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If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Thomas H Tarcza can be reached on 703-306-4171. The fax phone number for the organization where this application or proceeding is assigned is (703) 872-9306.

Any inquiry of a general nature or relating to the status of this application or proceeding should be directed to the receptionist whose telephone number is 703-308-1113.

Isam Alsomiri



January 13, 2004



THOMAS H. TARCZA
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